1: McGee E-5 (1894-1895)1898 NU31 Seri NU31



The principal ethnologic results of both expeditions relating to the Seri Indians are incorporated in the following pages; the data concerning the Papago are reserved for further study. The topographic surveys of the 1895 expedition covered a zone averaging 50 miles in width, extending from the international boundary to somewhat beyond Rio Sonora. Mr Johnson, by whom these surveys were executed, was on furlough from the United States Geological Survey, and his resumption of survey work prevented the construction of finished maps, except that of Seriland (plate I), which forms but a small fraction of the area surveyed. The results of the remaining, and by far the greater, part of the topographic surveys are withheld pending completion of the inquiries concerning the Papago Indians.

The geographic nomenclature found requisite in the field and in writing is partly new and partly restored, yet conforms with general and local custom so far as practicable; and nearly all of the new names have been applied in commemoration of explorers or pioneers. Most of the names pertaining to Seriland proper are incorporated in the map forming plate I; the others (including a few minor corrections) appear in the outline map forming figure 1, prepared after the larger sheet was printed.[1]

The following list of place-names is designed primarily to give the meaning and raison d'être of the nomenclature; with a single exception,[2] the names are Hispanized or Mexicanized in accordance with local usage.

*Nomenclature of Seriland.*[3]

*SERILAND: Extra-vernacular name of tribe, with English locative.

MAR DE CORTÉS (Sea of Cortés=Gulf of California): Customary Sonoran designation, applied by Ulloa (1539) in honor of Hernando Cortés, first discoverer of the gulf.

*PASAJE ULLOA (Ulloa passage): Generic Spanish; specific applied in honor of Captain Francisco de Ulloa, first navigator of the passage and the upper gulf, 1539.

*ESTRECHO ALARCON (Alarcon strait): Named in honor of Hernando de Alarcon, second navigator of the gulf, 1540.

EL INFIERNILLO (The Little Hell): Local designation, retained by the Hydrographic Office, U. S. N. (miswritten "Estrecho Infernillo" on larger map).

†BOCA INFIERNO (Mouth of Hell): A colloquial local designation (miswritten "Puerto Infierno" on larger map).

*BAHIA KUNKAAK (Kunkaak bay): Generic Spanish; specific the vernacular name of the Seri tribe (miswritten "Tiburon bay" on plates IV and V).

[1] The larger map was drawn early in 1895, and a preliminary edition in the form of a photolithograph of the drawing was published in the National Geographic Magazine, vol. VII, 1895. It is proper—and historically desirable—to explain that while a considerable part of the copy for this paper was prepared at about the same time, circumstances prevented the completion of the manuscript and the final rectification of the nomenclature and bibliographic references until September 1, 1898.

[2] Johnson peak. It is proper to say that this name was applied by the author (and leader of the expedition) after the drawing was completed and submitted by Mr Johnson, as a meager tribute to his excellent work in the field and on the drawings named.

[3] An asterisk indicates new names, an obelisk old names restored or colloquial names adopted.

114 128 103 114 175 [128]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

## SOMATIC CHARACTERS

142 Several physical characteristics of the Seri Indians are so conspicuous as to attract attention even at first sight. Perhaps the most striking is the noble stature and erect yet easy carriage; next in prominence is the dark skin-tint; a third is the breadth and depth of chest; another is the slenderness of limbs and disproportionately large size of extremities, especially the feet; still another is length and luxuriance of hair; and an impressive character is a peculiar movement in walking and running.

141 The mean stature of the adult Seri may be estimated at about 6 feet (1.825 meters) for the males, and 5 feet 8 inches (1.727 meters) or 5 feet 126 9 inches (1.73 meters) for the females, these estimates resting on visual comparisons between Caucasians of known stature and about forty 128 adult Seri of both sexes at Costa Rica in 1894. In several of the accompanying photomechanical reproductions (e. g., plates XIII, XVI, XIX, XXIII, and XXVIII) a unit figure, introduced partly for the encouragement of the individuals and groups but chiefly to afford a basis for approximate measurement, gives opportunity for test of the estimate, the figure measuring 5 feet 11 inches (1.80 meters) to 5 feet 11¼ inches (1.812 meters), and weighing about 215 pounds in the costume shown, including hat and boots.[1] These pictures and some thirty unpublished 141 photographs, like the observations on the ground, indicate that practically all of the fully adult males and several of the females overtop the Caucasian unit. The only definite measurement known is that of the youthful and apparently immature female skeleton examined by Dr Hrdlička, of which the dimensions indicate a stature (estimated by the method of Manouvrier) of about 5 feet 3⅞ inches (1.62 meters),[2] or 3½ inches above the female normal of 5 feet ¼ inch (1.53 meters) given by Topinard; but this considerable stature is, probably on account of the youth of the subject, much below the mean indicated by the ocular and photographic comparisons (it corresponds fairly with that of the Seri maiden represented in plate XXV, whose age was estimated at 18 years). Naturally this striking stature, especially that of the warriors, has been much exaggerated by casual observers; the typical warrior, El Mulo, depicted in plate XIX, is indeed commonly reckoned as a 7-footer, though his actual stature (diminished somewhat in the pictures by fearsome shrinking from the ordeal of photographing) can hardly exceed

[1] The average net height and weight of the unit figure (that of the author) are about 5 feet 8½ inches and 200 pounds, respectively.

[2] Or about 1.6470 meters estimated by the method of Bolk et. The Races of Man, J. Deniker, London, 1900, p. 89).

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31



142 Mashém (aged about 30 years), who had a few gray strands about the
145 temples; but it may be significant that the hair of the tribal outlaw
Koluaio, who has lived with white men for full three score years, is iron-
[115] gray. Koluaio's pelage is trimmed in Caucasian fashion; that of Mashém
is cut off mid-length in a manner exciting comment, if not derision,
[302] on the part of his fellows and others, and resulting in his (Spanish)
sobriquet, Pelado (literally, Peeled, or idiomatically, Shorn); but with
few exceptions the hair is kept long as it can be made to grow, and
receives careful attention to this end. Naturally the length is some-
what variable; in many cases it depends to or slightly below the waist,
while in other cases it merely sweeps the shoulders; and in general it
appears to increase in both length and luxuriance not only throughout
adolescence, but up to late maturity, for the best pelages are presented
by moderately aged persons, while none of the youths are so luxuriantly
tressed as their elders. Not the slightest tinge of baldness appears.
The infantile pelage is short, brownish in color, soft or even silky, and
inclined to curl toward the tips. It is not until the age of several
months that the hair begins to acquire the adult character, and at
least some children retain traces of the infantile pilary character up to
5 or even 10 years; and none of the children display such jet-black
shock-heads as are frequently found among other tribes, whose adult
pelage may nevertheless be much less luxuriant than that of the Seri.
On the whole, it may be said that the Seri hair is luxuriant and vigorous
beyond the aboriginal average, and that it, like various other somatic
features, indicates a relatively late maturation in the life-history of the
individual.

142 Both sexes are beardless. The female faces seen were entirely free of
strong pilary growth; one or two of the warrior faces showed scattering
hairs, and Mashém sported a feeble and downy but jet-black mustache
with an exceptional number of scattered hairs about the chin; while
Koluaio shaved regularly, and might, apparently, have grown moder-
ately stiff but straggling mustaches and beard. Axillary hair seems to
be wanting; pubic hair is said to be scanty; otherwise the bodies are
practically hairless (more nearly so than those of average Caucasians).

The teeth are solid, close-set, and even, and impress the observer as
large; they close with the upper incisors projecting slightly beyond
the lower dentare in the usual manner.

128 The skeletal characteristics of the Seri are known only from a single
specimen obtained in the course of the 1895 expedition in such manner
141 as to establish the identification beyond shadow of question. This
skeleton was submitted to Dr Aleš Hrdlička for measurement and
discussion.[1]

In making his examination, Dr Hrdlička compared the unquestion-

[1] A separate cranium was obtained by the 1895 expedition, having been sought and picked up by a Mexican member of the party in verification of his account of the killing of one of the Seri; but, in view of the possibility of erroneous identification, this skull was not submitted in connection with

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31



ably authentic cranium of the entire skeleton with two skulls preserved in the American Museum of Natural History, viz, No. 99/84, designated as a skull of a Tiburon mound-builder, and No. 99/85, labeled as having

the complete skeleton. Subsequently this specimen also was put in Dr Hrdlička's hands at his request, and was kindly examined, with the results recorded in the following letter:

MARCH 28, 1898.

Professor W J McGee,

*Bureau of American Ethnology, Washington, D. C.*

DEAR SIR: The skull which you submitted to me for examination shows the following:

The skull is that of a male between 40 and 50 years of age. The facial parts and a portion of the left temporal bone are wanting; otherwise the specimen shows nothing pathologic. There are signs that the skull belonged to a very muscular individual. The occipital depressions, ridges, and protuberances are very marked, and the temporal ridges approach to within 1.7 cm. on the left and 2.2 cm. on the right of the sagittal suture. The whole skull is rather heavy and massive; thickness of parietal bones 4.8 mm.

The shape of the skull is unusual. The frontal region is rather broad (frontal diameter, minimum, 9.7; frontal diameter, maximum, 12.1 cm.), but quite flat and sloping. Frontal ridges wanting (broken away).

The sagittal region is elevated into a crest which begins 4 cm. posteriorly from the bregma, is most marked at the vertex, and proceeds in the tapering diverging cross to the lambdoid suture. The whole vertex region is considerably elevated and forms a blunt cone, which is particularly noticeable when the skull is viewed from the side.

The temporo-parietal regions are moderately convex and expanded posteriorly, but become flattened and gradually narrow toward the parietal bones. The parietal bones measure each 11 cm. along the coronal, but only 8.8 cm. along the lambdoid suture. The gradual tapering of the parietal regions from their middle backward continues on the occipital bone up to the inion, and gives the norma verticalis of the skull a peculiar appearance.

The occipital region, as a whole, does not protrude much, as in true dolichocephals, but it shows a prominent broad crest, formed by the two superior semicircular lines and the region between them. The extreme occipital protuberance is pronounced and shows signs of strong muscular attachments. A small distance above the foramen magnum, on each side of the median line, is a very marked depression, surmounted by a [illegible] ridge.

Of the mastoids, the right has been broken off and the left is damaged, but they do not seem to have been of extraordinary size.

The base of the skull is fairly well preserved and shows the following characters: The basilar process and the petrous portions of the temporal bones are more massive than usual. The glenoid fossæ are broad and of fair depth. The styloids are quite massive (right 0.7, left 0.8 cm. long). The foramen magnum is hexagonal in outline; it is 4.1 cm. long, 3.4 cm. wide; its plane is inclined backwards in such a way that its antero-posterior diameter prolonged would touch about the lower borders of the nasal aperture.

The cranial cavity can be well inspected through the opening caused by injury. The internal surface of the frontal bone shows but very few traces of brain impressions. There are several large impressions on each parietal bone, and deep, though rather small, fossæ for the extremities of the occipital lobes on the occipital bone. The superior border of the foramen seems shows in the middle a rounded notch about 3 mm. deep.

The sutures of the osteon is throughout very simple.

*Measures.*—The glabello-occipital length and maximum width of the skull can not be accurately determined on account of injuries to the bones. They amount, respectively, to about 18.8 and 14 cm., giving the cephalic index of about 74.4 (moderate dolichocephaly). The basion-bregma height is 14.1 cm.; basion-vertex, 11.6 cm.; basion-nasion, 13.0 cm.; basion-lambda, 12.2 cm. The two more anterior of these measures characterize the skull as a rather high one. The two more posterior measures show the rapid downward slope of the posterior half of the sagittal region. The maximum circumference of the skull (above the ridges) is 51 cm.

The bregma-lambda arc measures 12.3, the lambda-opisthion arc 12.2 cm. The arc between the asterions = 10.7 cm.

If the skull under examination is considered from a purely evolutionary standpoint, it must be pronounced to be in many points inferior to the average white and even to the majority of Indian crania. An anthropological identification of the specimen is difficult, for the reason that we are still very imperfectly acquainted with the craniology of the peoples of southwestern United States and northern Mexico. From what we know of the crania of the Pima, and the extinct Santa Barbara, Santa Catalina, etc, Californians, it is possible to say that the individual whose skull is here reported upon may have belonged to a people physically related to either of these groups. The skull is very distinct from that of an Apache. The female Seri cranium examined by me is here shown certain of the peculiarities of this specimen, nevertheless it is very possible that both crania belonged to individuals of the same tribe.

ALES HRDLIČKA.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31



●128 141 been found in a shell mound at Tiburon, California; but, in view of the possible error in identification in these cases, the comparisons are omitted. Otherwise, Dr Hrdlička's determinations are as recorded in the following report (and his drawings of the anterior and left lateral aspects of the cranium are reproduced in figure 6):

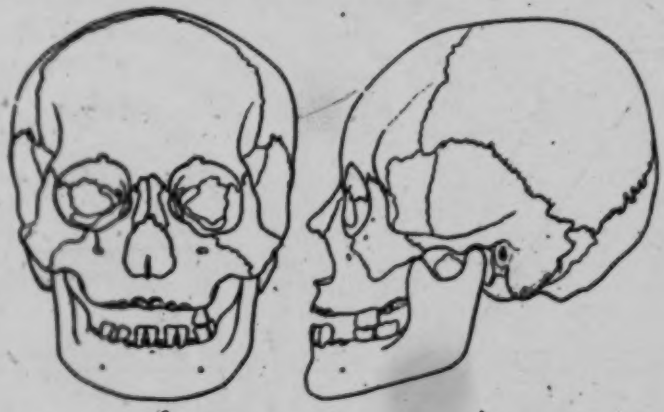

FIG. 6.—Anterior and left lateral aspects of Seri cranium.

## REPORT ON AN EXAMINATION OF A SKELETON FROM SERILAND

[By Dr ALEŠ HRDLIČKA, Associate in Anthropology, Pathological Institute, New York]

### *The Skeleton*

141 All the bones of the skeleton are present, except the sternum, the coccyx, a few of the teeth, and a few of the small bones of the extremities.

It is a skeleton of a young adult, between 20 and 24 years of age, female. The age of the subject is indicated mainly by the unattached epiphyses of the long and some of the short bones, those epiphyses, namely, which are the last to ossify. The femininity of the subject is indicated by the generally slightly marked ridges, etc, of muscular attachment, and by the decidedly feminine character of the pelvis (light, well-spread ilia, broad subpubic arch) and of the skull (lack of supraorbital ridges, thin dental arches, small mastoids, etc).

There are no wounds or pathological conditions noticeable on the skeleton. Several peculiarities and anomalies are observable. They will be described with the parts they concern.

[128] The measurements to follow are expressed in centimeters. The French anthropometric methods and nomenclature have been adopted.

### *The Skull*

The skull is of fair size, and is symmetrical throughout, with the exception of a slight irregularity in the occipital region. All the sutures, with the exception of the basilar, open; nerve foramina all large; serrations rather simple; no intercalate bones of any kind.

*Norma frontalis*—Visage symmetrical. Forehead well arched, medium height.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

## DEMOTIC CHARACTERS

000 The Seri, like all other peoples, are characterized by various collective attributes which vastly transcend in interest and importance the somatic attributes exhibited by the individuals. These superorganic attributes are essentially activital—i. e., they represent what the people *do* rather than what they merely *are;* and in both collective and activital aspects they serve to distinguish the human realm from the organic realm, and to afford a basis for the classification of mankind—i. e., they combine to form demotic characters.

128 The demotic characters of the Seri, like those of other peoples, may be classed as (1) esthetic, (2) industrial, (3) institutional, (4) linguistic, and (5) sophic; and in this order the essentially human attributes of the tribe (except the last named) may be described. It is a matter of deep regret that the data concerning the demotic characters of the tribe are too meager to afford more than a mere outline of their activities, and that their suggestive mythology must be passed over for the present.

### Symbolism and Decoration

#### Face-painting

302 One of the most conspicuous customs of the Seri is that of painting the face in designs by means of mineral pigments. Of the 55 members of the tribe shown in the group forming plate XIII, 28 (in the original photograph; a somewhat less number in the reproduction) exhibit face-painting more or less clearly, and this proportion may be regarded as typical; i. e., about half of the tribe are painted.

On noting the individual distribution of face-painting, it is found to be practically confined to the females, though male infants are sometimes marked with the devices pertaining to their mothers, as adult warriors are said to be on special occasions; and so far as observed all the females, from aged matrons to babes in arms, are painted, though sometimes the designs are too nearly obliterated by wear to be traceable. About 35 of the individuals shown in the group (plate XIII) are females; of these, fully four-fifths showed designs or definite traces of the paint, while the remaining fifth bore traces too faint to be caught by the camera; but none of the men or larger boys were painted. In the smaller group shown in plate XIV all of the females display paint, as does the small boy in the center also, while the man (husband of the middle-aged matron) reveals no trace of the symbol. The two pictures typify the prevalence and the distribution by sex of the painting.

2: Kroeber E-5 (1930)1931 NU31 Seri NU31



## McGEE ON THE SERI

The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

### *Data and Discussion*

The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

Head loads are carried on a ring of "yucca" fiber (p. 184).

The carrying stick or yoke, with nets to hold ollas, is considered aecultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 291) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana María. A Spanish-English interpreter is referred to. In 1895 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kahuis, an old Seri official interpreter who had left the island in childhood, never particularly liked it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the rancherías on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 9, 284, 1930.

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31



farm, but because they have secondarily specialized their culture away from the old Seri-Walapai substratum.

The Baja Californians must be reckoned as having participated in the same basal, low-level, desert culture, though of course, like every other people, with certain variants and developments of their own. That we can name fewer Seri traits in their culture than in that of the preceding groups, is probably due to the less store of our knowledge of them. More significant of relationship is the smallness of the number of Seri traits which they are known to lack. It is entirely possible that if there existed adequate information for both sides of the Gulf, Seri and Cochimi similarity would prove to be the closest of all. But at present this possibility cannot be either conclusively proved or disproved.

Seri similarities with southern and even central California are fairly numerous, and can be attributed partly to the common non-agricultural subsistence, which would tend to induce the adoption or retention of similar cultural traits. On the other hand, the basic farming life of the Opata, Mayo, and north Sinaloan peoples must have operated at many points in the opposite direction in spite of their geographical nearness. Pueblo culture is so highly specialized that its mass would expectably show little kinship to Seri, and such is the trend of the available comparative data.

The Seri thus relate culturally to other peoples much as might be anticipated from their geographical position and subsistence opportunities. The Seri problem consequently has to be removed from the category of those which hold out a hope or illusion of being particularly significant for the solution of basic questions or broad hypotheses. It is essentially a problem of specific local ethnography, with wider significances revealable only by impartial comparative studies; but of special interest because of the relatively well-preserved status of parts of old Seri culture and the human appeal of three centuries of outlaw history. The thorough study of this culture will involve much grinding physical hardship and possibly some danger. It is to be hoped that when the work is undertaken, it will not be in a spirit of personal adventure, with emphasis on the external difficulties to be overcome, but with a serious desire and competence to secure facts and understanding.

### ABBREVIATIONS USED

AA—American Anthropologist.
AMNH-AP—American Museum of Natural History, Anthropological Papers.
BAE-B—Bureau of American Ethnology, Bulletin.
BAE-R—Bureau of American Ethnology, Reports.
JAFL—Journal of American Folk-Lore.
UC-PAAE—University of California, Publications in American Archeology and Ethnology.

9: Malkin E-5 (1953-1955) 1962 NU31 Seri NU31

# Editorial Comment

121 This paper was originally written by Borys Malkin as a thesis in partial fulfillment of the requirements of the degree for Master of Arts in Anthropology at the University of Minnesota, 1960. It has since been 128 edited to verify scientific names and to drop some of the original introductory portions of the manuscript. Unfortunately, because of technical problems involved in reproducing them, the Seri names also had to be dropped.

At the time the manuscript went to press, the author was in South America conducting field work. It was not feasible to send various stages of proof to him for his personal attention, and the editors were not always certain of the appropriate decision.

000 *Seri Ethnoecology* represents an extension of the Idaho State College Museum's previous publishing policy in anthropology. However, its content and its quality are important and fall within our intent to publish items of wide as well as of regional scholarly interest.

E.H.S., B.R.B.

[p. iv]
[p. iii is blank]

©Malkin F-5 (1953-1955)1962 NU31 Seri NU31

121 Another Point in the Procedure is of par-
amount importance in this type of research. Fair
[120] general knowledge of practical field natural history can have no substitute. The investigator must have this basic knowledge, to realize the range of possibilities in the answers and identify any answers not commensurate with the actual events. This way, even without interest in the mythology, one may get on the track of a myth. Although, in
825 general, anthropologists seem to think that na-
121 tural history knowledge of the primitive folks must be ridden with the mythology and must be different than ours, my rather extensive field work persuaded me that this is not so at all. Mythology there is, if one looks for it. But the bulk of their knowledge is based on sound obervation as anyone acquainted with the natural history will readily discover. One must be able to disentangle the two qualities. That this is so is well indicated in a large number of animals where the informants simply replied to queries on this or that subject in the usual *quien sabe*. And indeed, the more obscure the subject, the more likely one got that sort of an answer.

● 128 In the analysis of the actual material a certain schematic programme has been followed. For the sake of convenience, material has been grouped according to the major divisions of the animal kingdom. Some may object to this sayihg that this is just our way of classifying animals but that aboriginal classification does not follow these lines. For certain purposes, this may be true, but for my own purpose I find my procedure more convenient. Regardless of the hypothetical native mode of classification, one may form a question.
128 How do the Seri distinguish different mammals?
825 I may say also that our own groupings are not different from those of the Seri or any other tribes. Their recognition of differences among animals may be at times hazy or from our point of view erroneous. But by and large, birds to them are birds and snakes are snakes and even within the insects, without actually naming differences, they tended to group together insects according to their order. Exceptional cases, bat, whale and the like, remain exceptions just as they were to the early Western naturalists, the 16th century Gesner or Alrovandi, for example, to whom their place in the scheme of nature was based on the analogies. But this didn't prevent these men from grouping other animals much the same as we do. In the same way, the South African Bushmen may regard Mantis as a supreme diety, but this does not prevent them to say that it is also like an insect.

128 The scheme I followed turned out useful. In the end I have obtained generalized ideas on the salient features of natural history of different animal groupings which I could compare with each other. The internal evidence is most interesting, more so that in some details it differs qualitatively and quantitatively from the materials I have gathered among other tribes.

[P. 5 B]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

# III

# MAMMALS

| Scientific | Common Name |
|---|---|
| *Antrozous pallidus* | Pallid bat |
| *Bassariscus astutus* | Ringtail cat (Cacomistle) |
| *Spilogale gracilis* | Spotted skunk |
| *Taxidea taxus* | Badger |
| *Urocyon cinereoargenteus or Vulpes macrotis* | Grey fox or kit fox |
| *Canis latrans* | Coyote |
| *Felis concolor* | Mountain Lion. |
| *Felis onca* | Jaguar |
| *Felis eyra* | Juguarundi |
| *Zalophus californianus* | California sea lion |
| *Dipodomys sp.?* | Kangaroo rat |
| *Erethizon dorsatum* | Porcupine |
| *Lepus californicus* | Blacktailed rabbit |
| *Sylvilagus audubonii* | Desert cottontail |
| *Pecari angulatus* | Peccary |
| *Odocoileus hemionus* | Mule Deer |
| *Ovis canadensis* | Bighorn |
| *Eschrichtius glaucus* | California grey whale |
| *Orcinus rectipinna* | Killer whale |
| *Tursiops gillii* | Bottlenosed dolphin |

Identification here has been obtained largely with an aid of field guides or by mentioning a colloquial local name of the mammal in Spanish. All these were later checked by Dr. Robert T. Orr of the California Academy of Sciences. While there is no doubt of the identity of the most common forms, such as peccary or sea-lion, there are also several of the identifications which can't be certain either because of inadequate line drawings or lack of specimens, either alive at a distance or even parts of them. In this somewhat dubious category are Ringtail cat, Jaguarundi and the Killer whale.

On the other hand, there is no doubt as to the identity of the following: Pacific pale bat, badger, bighorn, coyote, kangaroo rat, blacktail rabbit, cottontail jackrabbit, deer and dolphin. Live, free or captive individuals, or part of them, such as horns, hide or skulls were available.

## Economic Uses

Food: Only 6 out of 21 species for which information is available are used today as food. Three more were mentioned as "eaten in the past" and one more as "possibly eaten in the past." Since the oldest of the informants who provided this data, Miguel Barnett, is a man in his fifties (and it is he who talked most often about the animals "eaten in the past but not now") we may surmise that these were part of the Seri diet 25-45 years ago, that is between 1910-1930.

Five species are important as a supplementary source of food: the bighorn, the deer, peccary and both species of rabbits. Some, the deer especially, are considered to be delicacies. The sixth species is the badger but it appears neither important nor frequently killed. I saw one badger captured by José Juan Moreno. The animal was tied to the pole, and kept as a pet, fed on fish, snake and

Bancroft F-5 (1953-1956)1963 MU31 Seri MU31

# IV

# BIRDS

| Scientific | Common Name |
|---|---|
| *Pelecanus erythrorhynchos* | White pelican |
| *Pelecanus occidentalis* | Brown pelican |
| *Phalacrocorax* | Cormorant |
| *Fregata magnificens* | Frigate bird<br>Man-O'War Bird |
| *Casmerodius albus*<br>*Leucophoyx thula* | American egret or<br>Snowy egret |
| *Botaurus lentiginosus* | American bittern |
| *Plegadis chihi* | White-faced ibis |
| ? | Duck, species? |
| *Cathartes aura* | Turkey vulture |
| *Coragyps atratus* | Black vulture |
| *Aquila chrysaetos* | Golden eagle |
| *Haliaetus leucocephalus* | Bald eagle |
| *Pandion haliaetus* | Osprey |
| *Odontophorinae* | Quail |
| *Numenius sp.* | Curlew |
| *Scolopacidae* | Sandpiper |
| *Catoptrophorus*<br>*semipalmatus* | Willet |
| *Larus occidentalis* | Western gull |
| *Larus heermanni* | Heermann gull |
| *Columbidae* | Dove |
| *Geococcyx californianus* | Roadrunner |
| *Tyto alba* | Barn owl |
| *Trochilidae* | Hummingbird |
| *Centurus uropygialis* | Gila woodpecker most<br>likely |
| *Hirundinae* | Swallow |
| *Corvus corax* | Raven |

Identifications had been mine from sightings and from Blake's *Birds of Mexico* and a few other field manuals and then were checked by Dr. R. T. Orr. In many cases, especially where sightings were from geat distances or actual specimens were not available, the exact identification is uncertain and this fact should be indicated here. In several instances here are several possibilities and these are as follows:

Cormorant—Here there are three possibilities according to Dr. Orr:
1. Double crested cormorant (*Ph. auritus albociliatus*)
2. Mexican cormorant (*Ph. Olivaceus mexicanus*)
3. Pelagic cormorant (*Ph. Pelagicus resplendens*)

Egret—Two possibilities:
1. American egret (*Casmerodius albus*)
2. Snowy egret (*Leucophox thula*)

Duck—Identification impossible since no specimens were seen. It is supposedly black in color. Undoubtedly it is a duck, but which sp?

Eagle—Probably either Golden eagle or the Bald eagle. The size militates against any other bird of prey.

Quail—No identification beyond the family possible

Curlew—Dr. Orr suggests that it is either the Long Billed Curlew (*Numenius americanus sp?*) or Hudsonian Curlew (*N. hudsonicus*)

Sand-piper—One of many possible species in the area

Sea-gull—Most gulls I have seen are Heermann gulls (*Larus heermanni*) but some were the Western gull (*L. occidentalis*). These are the two common summer species. But there are also others and, according to Dr. Orr, also there are several others wintering in the region. So, Seris' generalized comments on the seagulls may well apply to several species.

Dove—Seri information applies to several species common in the area.

[P.17A]

Pikaalkin E-5 (1953-1956)1962 NU31 Seri NU31

# IV

# BIRDS

136 Woodpecker—There are several species in the area but
Gila woodpecker (*Centurus uropygialis*)
●128 is certainly one of them.

Hummingbird—Unspecified species, one of several occurring in the area according to Dr. Orr.

## Economic Uses

262 Such use as had been made of the birds is largely in the form of an addition to the diet. Reading McGee, one gets the impression that the importance of the birds in the Seri diet, in contrast to the marine animals of all description, has declined greatly. We do know that in the past various birds and, most especially, the seagulls and the pelicans represented a significant item. But today out of the basic list of 24 species, only six has been reported as eaten and, all, with an exception of the duck, in the past tense. The duck
*[825] evidently is the only bird which the Seri consider really fit to eat and yet, even here, there is temporary avoidance. Moreno told me that this bird "we eat only when we visit the island (Isla Patos).
[223] But we do not eat it in September because it is
[252] too lean. We like it in December when it is fat. We then kill it at night with stones. It is roasted."[1]

All other birds were reported as eaten only in the past and this has been expressed more or less as follows: sea-gull eaten a few years ago, cormorant 8-10 years ago, pelicans 30-35 years ago. This would mean that the pelicans had been discarded as food, at least according to the official Seri version, in the early twenties, before Kroeber's visit. But the Seri disclaimers on the subject
183 of the bird diet are not entirely correct and re-
262 flect less the total rejection and more only low esteem in which these birds are held. For I have seen myself the sea-gull and the pelican eaten on few occasions when times were tough, and the
[261] food supply was non-existent, owing to the choppy
*[825] and windy seas. The Seris caught in the act of cooking the meagre flesh of the pelican or the sea-gull were obviously apologetic.

262 It is interesting that some of the birds present in the area, the quail or the woodpeckers, are not eaten although these birds figure prominently in the diet of some of the other groups. It may well be that the Seris consider them too small to bother.

[252] As far as I could find out, eggs of only two species of birds, the sea-gull and the heron, are collected, boiled and eaten. But the eggs of the

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[1] His statement requires some explanation. There is no taboo on eating duck but the bird does not occur in Desemboque or any other place known to the Seris, with
[136] the exception of Isla Patos. Here these birds winter,
*[825] arriving in September and arrive worn out and lean, to recoup the fat, a few months later. The Seri unfamiliarity with their eggs is another indication that the birds come to Isla Patos only for the winter.

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# V

# REPTILES AND AMPHIBIANS

136

| Scientific Name | Common Name |
|---|---|
| **Lizards** | |
| *Phrynosoma platyrhinos goodei* | Horned toad |
| *Callisaurus draconoides inusitatus* | Gridiron-tailed lizard |
| *Cryptophytus wislizeni* | Common leopard lizard |
| *Cnemidophorus scalaris* | Spotted race runner |
| *Cnemidophorus tigris aethiops* | Race runner |
| *Sauromalus obesus tournoueri* | Northern chuckawalla |
| *Sauromalus varius* | Chuckawalla |
| *Dipsosaurus dorsalis sonoriensis* | Northern crested lizard |
| *Heloderma suspectum* | Gila monster |
| *Uta ornata linearis* | Uta |
| *Uta stansburiana steinegeri* | Striped ground uta |
| *Sceloporus magister* | Fence lizard |
| *Coleonyx variegatus sonoriensis* | Variegated ground gecko |
| *Xantusia vigilis* | Desert night lizard |
| **Snakes** | |
| *Crotalus cerastes cercobombus* | Side winder |
| *Crotalus atrox* | Western diamondback |
| *Micruroides euryxanthus* | Coral snake |
| *Coluber flagellum frenatus* * | Red racer |
| *Coluber flagellum piceus* * | Black whipsnake |
| *Salvadora hexalepis deserticola* | Patch nose snake |
| *Trimorphodon lambda* | Lyre snake |
| **Turtles** | |
| *Gopherus agassizi* | Agassiz' desert tortoise |
| *Sp?* | Loggerhead |
| *Sp?* | |
| **Amphibians** | |
| *Bufo alvarius* | Desert toad |

*These two are color varieties of the same species.

## Reptile Identification

136
128 With the exception of the marine turtles, all species had been identified from preserved specimens either by myself or by Dr. R. Zweifel, Dr. C. M. Bogert, and Mrs. Hecht from the American Museum of Natural History, who also checked my identifications. There is then no question of dubious identification. But circumstantial evidence
* 825 suggests that belief in the mildness of the coral snake bite, to themselves at least, may well be in-
136 fluenced by the proliferation of the false coral snakes in the area. Mrs. Hecht lists the following of these as likely to occur in the area:

*Lampropeltis nelsoni*
*Lampropeltis pyromelana*
*Rhinocheilus lecontei antoni*
*Chionactis occipitalis organica*
*Chionactis occipitalis palarostris*
*Chilomeniscus cinctus*

These snakes are very similar to the coral snakes and may well fool most observers, unless they know the differences in the color pattern. Unfortunately, I have not found any of them; there-

[P.22A]

Salalkin E-5 (1963-1858) 1962 NUSI Seri NUSI

# VI

# FISHES

| Scientific | Common Name |
|---|---|
| *Stereolepis gigas* | |
| *Mycteroperca jordani* | |
| *Cynoscion macdonaldi* | |
| *Epinephelus analogus* | |
| *Trachinotus paitensis* | |
| *Verrunculus polylepis* | |
| *Myrichthys tigrinus* | |
| *Gymnothorax castaneus* | Moray |
| *Batrdiella iridina* | |
| *Anchovia macrolepidota* | |
| *Cynoscion parvipinnis* | |
| *Mugil sp.* | |
| *Cetengraulis mysticetus* | |
| *Lythrulon flavigutatum* | Flounder? |
| *Paralabrax maculato fasciatus* | |
| *Paraques viola* | |
| *Sphaeroides annulatus* | |
| *Aniaotremus davidsonii* | |
| *Girella simplicidens* | |
| *Abudefduf saxatilis* | |
| *Gobiosoz pinniger* | |
| *Hypsoblennius gentilis ricketti* | |
| *Gilliichthys seta* | |
| *Scorparna sonorae* | |
| *Malacoctenus zonifer* | |
| *Cypselurus sp. or Fodiator acutus* | Flying fish |
| *Neothunnus albacares* | Tuna |
| *Ogilbia sp.* | |
| *Lutjanus argentiventris* | |
| *Conodon servifer* | |
| *Manta birostris* | Horned manta |
| *Urolophus halleri* | Sting ray |
| *Mustelus lunulatus* | |
| *Shark undet.* | |
| *Shark undet.* | |
| *Shark undet.* | Dogfish? |
| *Shark undet. A.* | |
| *Shark undet. B.* | |
| *Shark undet. C.* | |
| *Sphyrna* | |
| *Galeocerdo cuvieri* | |

The largest number of specimens were identified from preserved specimens by Dr. W. I. Follett of the California Academy of Sciences. This included all smaller fishes. But the largest were determined solely from the well-known vernacular names. The large fishes of the Gulf are well-known and have established local names among the Mestizos. These names are also much in use among the Seris. In several instances, however, it was impossible to determine the species of animal. In such cases, no scientific identification has been made, but their distinct traits were drawn from the Seri comments about them, their natural history, behaviour and ecology. Seris' clear-cut recognition of many of these features as applied to the fishes makes most such differentiations fairly easy.

Out of 42 species in the list, nine are sharks. There are, of course, many more species of sharks in the Gulf. But Seri recognition of nine speaks pointedly of their interest in the fishes.

[P 31 A]

9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31



| Scientific | Common Name |
|---|---|
| *Octopus bimaculatus* | Two spotted octopus |
| *Tetibranchiata* | Sea-hare |
| *Ischnochiton Magdalenensis* | Gulf Chiton |
| *Ischnochiton laevigatus* | Chiton |
| *Codakia distinguenda* | Clam |
| *Cardium consors* | Cockle |
| *Laevicardium elatum* | Giant Cockle |
| *Carditamera affinis* | Ruffled clam |
| *Acmaea dolliana* | Limpet |
| *Crucibulum spinosum* | Spiry Limpet |
| *Chione undatella* | Frilled chione |
| *Chione californiensis* | California chione |
| *Pteria peruviana* | Wing shell |
| *Isognomon chemnitzianus* | Pouch shell |
| *Volsella capax* | Horse mussel |
| *Crepidula squama* | Boat shell |
| *Olivella dama* | Olive shell |
| *Cypraea annettae* | Annette's cowry |
| *Tegula rugosa* | Turban shell |
| *Conus regularis* | Cone shell |
| *Phyllonotus erythrostomus* | Pink-mouthed Murex |
| *Turritella broderipiana* | August shell |
| *Polinices reclusiana* | Southern moon-shell |
| *Phallium abbreviatum* | |
| *Chlamys subnodosa* | Noded scallop |
| *Atrina maura* | Pen shell |
| *Naicula pacifica* | |
| *Turbo (Callopoma) fluctuosa* | Turban shell |
| *Solenostira pallida* | Top shell |
| *Cerithium stercusmuscorum* | Spindle |
| *Knefastia funiculata* | Spindle |
| *Neritina luteofasciatus* | Nerite |
| *Columbella fuscata* | Dove shell |
| *Trivia radians* | Coffee bean |
| *Tellina rufescens* | Tellen shell |
| *Ficus ventricosus* | Fig shell |
| *Nioche biatrionica* | ? |

While most specimens were identified from live material collected in tide-pools and kept in buckets as long as they lasted, some dead shells had also been used, especially those from the kitchen-middens rather numerous in the immediate Desemboque area.

By far most of the species had been identified by Dr. J. P. E. Morrison of the United States National Museum. To these I added a few identifications of my own, while Dr. Grace Pickford of the Osborn Laboratories, Yale University, identified the octopus and Dr. Rudolf Stohler of the University of California identified the chitons.

**Economy**

A very considerable proportion of the molluscs is used by the Seris in various ways. The tabulation will present the data much more clearly than could be done in a discussion.

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

# IX

# MISCELLANEOUS

136

| Scientific | Common Name |
|---|---|
| *ANNELIDA* | |
| Annelid worm (tube) | |
| *POLYCHAETA* | |
| Eurythoe | Stinging worm |
| *ECHINODERMATA* | |
| *Heliaster sp.* | Star fish |
| *Holothurioidea* | Sea cucumber |
| *Encope grandis* | Sand dollar |
| *Echinometra vanbrutti* | Regular sea urchin |
| *COELESTERATA* | |
| *Anthozoa* | Sea-anemone |
| *Medusa* | Jelly-fish |
| *PORIFERA* | |
| *Porifera* | Sponge |

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136 All these miscellaneous animals are grouped together and discussed together simply because only few species from each group are represented and any generalized comments are not reliable.

The following individuals identified the material. Annelid worm (from tube only)—J. E. P. Morrison, U.S. National Museum.

Sea-urchins — Elisabeth Deichman, Harvard University.

Remainder—Borys Malkin

## Taxonomy

*825 With an exception of the sponge, all of the forms listed here are considered animals and not plants. The criterion is movement and when questioned for reasons the informants invariably replied "this is an animal because it moves." It applies equally to the jelly-fish and the *Echinoderms*. The *Annelid tubular worm* is also considered an animal and its shell is instantly recognized as an animal shell. This is surely owing to the movement of the worm in and out of the shell, although the worm does not move with the shell, being imbedded on rocks.

[824] The sponge, on the other hand, was said to "stay on rocks for 5-6 years. It does not walk. It is an alga or plant, not an animal. There are several different kinds, different in color." Thus the minutest sort of movement is shown again to be the basic criterion for the distinction between animals and plants.

## Sexing

The Seris know nothing about sex differences in these groups. Of course, several of these beasts are hermaphroditic and self-fertilizing, and there are no visible differences. But in any case the informants simply didn't know what the differences between the sexes are.

## Food

No knowledge.

[P-45A]

so named must be of the same sex as the first. The significance of land ownership needs further investigation.

Many of the Seri still prefer, when possible, to live in their chosen band area. Sometimes a person, when he is approaching death, will ask to be taken to his own i?iziiting, where he can die and be buried in the area of his choice.

NOTES

1. Due to printing limitations, stress on Seri words has been omitted, and several orthographic symbol changes have been made for this paper. The phonetic values of the symbols used are the following: *p* is voiceless labial stop; *t* is vl. dental stop; *k* is vl. velar stop; ? is glottal stop; *f* is vl. labial flat spirant; *w* is vl. labial grooved-rounded spirant; *s* is vl. alveolar spirant; *z* is vl. alveo-palatal spirant; *l* is vl. lateral spirant; *h* is vl. velar spirant; *x* is vl. back velar spirant; *m* is labial nasal; *n* is dental nasal; *ng* is velar nasal; *y* is palatal semivowel; *i* is a high close front vowel; *e* is a low close front vowel; *a* is a low open central vowel; *o* is a mid close back vowel.

2. These data were compiled during field trips to the Seri camps during the years 1956-61, the studies being carried out under the auspices of the Summer Institute of Linguistics. The principal informant was R. Herrera T. whose information was checked with and supplemented by nine of the older members of the tribe. I am indebted to my colleague, David Thomas, who read an earlier draft of this paper and made helpful suggestions.

3. 1) W. J. McGee, "The Seri Indians," *Bureau of American Ethnology, Annual Report*, No. 17, Part 1. Washington, 1898. 2) A. L. Kroeber, "The Seri," *Southwest Museum Papers*, No. 6. Los Angeles, 1931. 3) W. B. Griffen, "Notes on Seri Indian Culture, Sonora, Mexico," *Latin American Monograph Series*, No. 10, Gainesville, 1959.

4. It will be noted that between subdivision 3 and 4 on Fig. 3 there is an unnumbered area, the status of which is uncertain.

5. Kroeber states that McGee's concept of Seri maternal lineages crystallized into totemic clans with matron rule seem a fantasy. In Kroeber's opinion, "The Seri may never have had sibs or clans; but the fact that they appear to lack them now is no positive evidence that they were without them three centuries ago. Shifts of residence, contraction of territory, shrinkage of numbers, amalgamation of distinct bands, may well have obliterated much of such social fabric as they once possessed."

Griffen discusses the nature of the former Seri bands and states, "they may have been patrilineal and exogamous. The criteria . . . that Julian Steward has exposited for the formation of exogamous, patrilineal bands . . . are and presumably would have been met formerly in the Seri habitat." Griffen lists other aspects of this type of band which are also verified to some extent by his data. From reading his material, it is obvious that he suspects the existence of clans at some earlier period. He emphasizes the need for further investigation.

6. G. P. Murdock, *Social Structure*, Macmillan Co., New York, 1949.

7. Marriages were usually contracted within the band.

8. As Kroeber points out, their memory likely covers only the latter part of the period of Spanish contacts.

9. The Seri recall nothing of Seri-Pima contacts and little of Seri-Apache relations.

10. The story is related that one day some Seri entered a cave where they found several Papago jugs filled with seeds. Being hungry, the people ate the seeds and left some arrows as token payment. The Seri say that the Papago apparently believed the arrows were intended as an insult. Fighting broke out soon afterward.

11. The Seri concept of the band annihilations is seen to be in contradiction to McGee's statement (p. 132): "Concordantly with their primary characteristic, the Seri have avoided ethnic and demotic union beyond the narrow limits of their own kindred; and even of these they seem to have cast out parts, annihilating the Guaymas and Upanguaymas, displacing and nearly destroying the Tepokas, and outlawing individuals and (apparently) small groups."

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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## ACKNOWLEDGMENTS

I am indebted to Richard Felger, Department of Zoology, University of Arizona, for information concerning plants referred to in this article. H. Wesley Peirce of the Arizona Bureau of Mines identified the mineral material used in the pigment.

## NOTES

104 386 114

1. The phonetic values of the symbols used are the following: t is voiceless dental stop; k is vl. velar stop; ? is glottal stop; W is vl. labial grooved-rounded spirant; s is vl. alveolar spirant; z is vl. alveo-palatal spirant; l is vl. lateral spirant; j is vl. velar spirant; x is vl. back velar spirant; m is labial nasal; n is dental nasal; i is a high close front vowel; e is a low close front vowel; a is a low open central vowel; o is a mid close back vowel.

386 784 821

2. The restriction as stated to me by various women pertains only to young girls below the age of menarche. Actually, however, none of the above-mentioned young men and women, most of them in their twenties, was allowed to observe.

926

3. Plant specimens are deposited in the Herbarium of The University of Arizona.

386 114

4. The blue "pencil" which McGee describes (McGee 1898: 168) and pictures (McGee 1898: Plate XXVII facing p. 170) is apparently the ?antezj koil.

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